AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound having the formula (I):

and salts thereof;

wherein R is:

$$\begin{array}{c|c}
 & & B \\
\hline
 & & \dot{N} & (X)_n & A \\
\hline
 & & \dot{S} & & \dot{N} & (X)_n & A \\
\hline
 & & \dot{S} & & \dot{N} & (X)_n & A \\
\hline
 & & \dot{S} & & \dot{N} & & \dot{S}
\end{array}$$

wherein X and X" are independently selected from C=O, C=S, C=NH,

C=NRX, S=O or SO2;

wherein n is 1;

wherein RX is selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl, hydroxyl, alkoxy, carboxy or carboalkoxy;

wherein B is X'RY, H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl or heterocyclyl; and

wherein RY is selected from hydrido, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl or hydroxyl;

wherein A is H, NH₂, NHR^A, NR^AR^B, heteroaryl, cycloalkyl or heterocyclyl;

wherein R^A and R^B are independently selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl or carboalkoxy;

provided that when B is H and X is C=O, then A is other than

(a) a pyridinyl ring substituted with a single NHC(O)R^D substitutent or

(b) a (C, C) artered a releabled ring substituted with a single NHC(O)

(b) a (C_5-C_6) saturated cycloalkyl ring substituted with a single NHC(O)R^D substitutent, wherein R^D is (C_1-C_{17}) unsubstituted alkyl or (C_2-C_{17}) unsubstituted alkenyl;

wherein X' and X'" are independently selected from C=O, C=S, C=NH, C=NR^X, S=O or SO₂;

wherein m is 0 or 1;

wherein R^X is selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl, hydroxyl, alkoxy, carboxy or carboalkoxy;

wherein B' is X'''R', H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl or heterocyclyl;

wherein RY is selected from hydrido, alkyl, alkenyl, alkynyl, aryl,

heteroaryl, cycloalkyl, heterocyclyl or hydroxyl;

wherein A' is H, NH₂, NHR^{A'}, NR^{A'}R^{B'}, alkyl, alkenyl, alkynyl, alkoxy, aryloxy, aryl, heteroaryl, cycloalkyl or heterocyclyl;

wherein RA' and RB' are independently selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl or carboalkoxy;

wherein when m is 0, then A' is additionally selected from the group consisting of:

wherein each of R⁵⁰-R⁵³ is independently selected from C₁-C₁₅ alkyl; alternatively, wherein B' and A' together form a 5-7 membered heterocyclic or heteroaryl ring;

wherein R² is

wherein K and K' together form a C_3 - C_7 cycloalkyl or heterocyclyl ring or a C_5 - C_{10} aryl or heteroaryl ring;

wherein J is selected from the group consisting of hydrido, amino, NHR^J, NR^JR^K, alkyl, alkenyl, alkynyl, alkoxy, aryloxy, aryl, heteroaryl, cycloalkyl, heterocyclyl, alkylamino, hydroxyl, thio, alkylthio, alkenylthio, sulfinyl, sulfonyl, azido, cyano, halo,

$$\xrightarrow{\text{NR}^{24} \text{R}^{25}} \quad \text{and} \quad \xrightarrow{\text{S}} \quad \text{OR}^{26}$$

wherein each of R²⁴, R²⁵, and R²⁶ is independently selected from the group consisting of alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl; or R²⁴ and R²⁵ together form a 5-8 membered heterocyclyl ring;

wherein R^J and R^K are independently selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl or heterocyclyl; or

alternatively, wherein J, together with R¹⁷, forms a 5-8 membered heterocyclyl or cycloalkyl ring; or

alternatively, wherein J, together with both R¹⁷ and R¹⁸, forms a 5-8 membered aryl, cycloalkyl, heterocyclyl or heteroaryl ring; and

wherein each of R¹⁷ and R¹⁸ is independently selected from the group consisting of hydrido, halo, hydroxyl, alkoxy, amino, thio, sulfinyl, sulfonyl and

wherein R¹⁷ and R¹⁸ taken together can form a group consisting of ketal, thioketal,

wherein each of R^{22} and R^{23} is independently selected from the group consisting of hydrido and alkyl.

2. (Currently amended) A compound having the formula (I):

and salts thereof;

wherein R is:

wherein X and X" are independently selected from C=O, C=S, C=NH, C=NR X , S=O or SO₂;

wherein n is 1;

wherein R^X is selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl, hydroxyl, alkoxy, carboxy or carboalkoxy;

wherein B is X"R", H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl C058 Response to 070904OA 01-10-05 FINAL.

or heterocyclyl; and

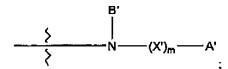
wherein RY is selected from hydrido, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl or hydroxyl;

wherein A is aryl;

provided that when B is H and X is C=O, then A is other than a phenyl ring substituted with either:

- (a) -O-((C_8 - C_{15}) unsubstituted alkyl), wherein said phenyl ring may be further optionally substituted with one substituent selected from halo, nitro, (C_1 - C_3) alkyl, hydroxyl, (C_1 - C_3) alkoxy or (C_1 - C_3) alkylthio; or
- (b) $-NHC(O)R^D$, wherein the phenyl ring may be further optionally substituted with 1-2 substituents independently selected from amino, nitro, (C_1-C_3) alkyl, hydroxyl, (C_1-C_3) alkoxy, halo, mercapto, (C_1-C_3) alkylthio, carbamyl or (C_1-C_3) alkylcarbamyl, wherein R^D is (C_1-C_{17}) unsubstituted alkyl or (C_2-C_{17}) unsubstituted alkenyl;

wherein R¹ is



wherein X' and X''' are independently selected from C=O, C=S, C=NH, C=NR^{X'}, S=O or SO₂;

wherein m is 0 or 1;

wherein R^{X'} is selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl, hydroxyl, alkoxy, carboxy or carboalkoxy;

wherein B' is X"RY, H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl or heterocyclyl;

wherein R^Y is selected from hydrido, alkyl, alkenyl, alkynyl, aryl,
C058 Response to 070904OA 01-10-05 FINAL 7

heteroaryl, cycloalkyl, heterocyclyl or hydroxyl;

wherein A' is H, NH₂, NHR^{A'}, NR^{A'}R^{B'}, alkyl, alkenyl, alkynyl, alkoxy, aryloxy, aryl, heteroaryl, cycloalkyl or heterocyclyl;

wherein RA' and RB' are independently selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl, heterocyclyl or carboalkoxy;

wherein when m is 0, then A' is additionally selected from the group consisting of:

$$- \begin{cases} 0 \\ -P - OR^{50} \end{cases} - \begin{cases} 0 \\ -P - R^{52} \end{cases} \text{ and } - \begin{cases} 0 \\ -P - OR^{50} \end{cases}$$

wherein each of R⁵⁰-R⁵³ is independently selected from C₁-C₁₅ alkyl; alternatively, wherein B' and A' together form a 5-7 membered heterocyclic or heteroaryl ring;

wherein R2 is

wherein K and K' together form a C₃-C₇ cycloalkyl or heterocyclyl ring or a C₅-C₁₀ aryl or heteroaryl ring;

wherein J is selected from the group consisting of hydrido, amino, NHR^J, NR^JR^K, alkyl, alkenyl, alkynyl, alkoxy, aryloxy, aryl, heteroaryl, cycloalkyl, heterocyclyl, alkylamino, hydroxyl, thio, alkylthio, alkenylthio, sulfinyl, sulfonyl, azido, cyano, halo,

$$- \begin{cases} S \\ NR^{24}R^{25} \end{cases} \text{ and } - \begin{cases} S \\ OR^{26} \end{cases}$$

wherein each of R²⁴, R²⁵, and R²⁶ is independently selected from the group consisting of alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl; or R²⁴ and R²⁵ together form a 5-8 membered heterocyclyl ring;

wherein R^J and R^K are independently selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, cycloalkyl or heterocyclyl; or

alternatively, wherein J, together with R¹⁷, forms a 5-8 membered heterocyclyl or cycloalkyl ring; or

alternatively, wherein J, together with both R¹⁷ and R¹⁸, forms a 5-8 membered aryl, cycloalkyl, heterocyclyl or heteroaryl ring; and

wherein each of R¹⁷ and R¹⁸ is independently selected from the group consisting of hydrido, halo, hydroxyl, alkoxy, amino, thio, sulfinyl, sulfonyl and

wherein R^{17} and R^{18} taken together can form a group consisting of ketal, thicketal,

wherein each of \mathbb{R}^{22} and \mathbb{R}^{23} is independently selected from the group consisting of hydrido and alkyl.

Claims 3-4 (Canceled)
C058 Response to 070904OA 01-10-05 FINAL

5. (Previously presented) The compound according to claim 1, wherein R is selected from the group consisting of:

wherein each of R³, R⁴, R⁵, and R⁶ is independently selected from the group consisting of hydrido, alkyl, aryl, heterocyclyl and heteroaryl, and wherein R²⁰⁰ is selected from the group consisting of hydrido, heterocyclyl, and heteroaryl.

6. (Previously presented) The compound according to claim 5, wherein R is selected from

and wherein R^{4'} is selected from the group consisting of heteroaryl, and heterocyclyl.

C058 Response to 070904OA 01-10-05 FINAL 10

7. (Previously presented) The compound according to claim 6, wherein R is

8. (Currently amended) The compound according to either of claims 1 or 2, wherein R¹ is selected from the group consisting of:

$$R^{12}$$
, R^{12} , R^{12} , R^{13} , R^{10} , R^{13} , R^{1

wherein R⁸ is selected from a natural amino acid side chain or an amino acid side chain that is not naturally occurring;

wherein each of R⁹, R¹⁰ and R¹¹ is selected from the group consisting of hydrido, alkyl, aryl, heterocyclyl and heteroaryl;

wherein R^{12} is selected from the group consisting of heterocyclyl, heteroaryl, aryl, and alkyl and C058 Response to 070904OA 01-10-05 FINAL 11

alkyl;

wherein R¹³ is selected from (C₁-C₃-alkyl) and aryl.

9. (Previously presented) The compound according to claim 8, wherein R¹ is selected from the group consisting of:

$$X^4$$
 NR^{10}
 NR^{11}
 NR^{11}
 NR^{11}
 NR^{11}
 NR^{11}
 NR^{12}
 NR^{13}
 NR^{14}
 NR^{15}
 NR^{15}

wherein R^8 is selected from tryptophan side chain and lysine side chain; wherein each of R^{10} and R^{11} is independently selected from hydrido and

wherein R^{12} is selected from imidazolyl, N-methylimidazolyl, indolyl, quinolinyl, benzyloxybenzyl, and benzylpiperidenylbenzyl; and wherein X^4 is fluoro, or trifluoromethyl.

10. (Previously presented) The compound according to either of claims 1 or 2, wherein J is selected from the group consisting of hydrido, amino, azido and

12

wherein R¹⁷ and R¹⁸ taken together form a group selected from ketal,

$$= \begin{cases} = 0 & \text{and} & = \end{cases} = NOR^{22}$$

or wherein R¹⁷ is hydroxyl when R¹⁸ is hydrido; or wherein J, together with R¹⁷, forms a heterocyclyl ring.

11. (Previously presented) The compound according to claim 10, wherein \mathbb{R}^2 is selected from the group consisting of

wherein R^{17} and R^{18} taken together form a group selected from

$$= \begin{cases} = 0 & \text{and} & = \end{cases} = NOR^{22}$$

, wherein R²² is selected from the group consisting

of H and alkyl; and wherein R¹⁹ is selected from the group consisting of hydrido, amino,

13

12. (Original) The compound according to claim 11, wherein R² is

Claims 13-14 (Canceled)

- 15. (Previously presented) A pharmaceutical composition comprising the compound according to either of claims 1 or 2 and a pharmaceutically acceptable carrier.
- 16. (Previously presented) A method of treating a bacterial infection in a subject, comprising the step of administering a therapeutically-effective amount of the pharmaceutical composition according to claim 15 to a subject in need thereof for a time and under conditions effective to ameliorate said bacterial infection.
- 17. (Previously presented) The method according to claim 16, wherein said subject is selected from the group consisting of a human, an animal, a cell culture and a plant.
- 18. (Original) The method according to claim 16, wherein said bacterial infection is caused by a gram-positive bacteria.

 C058 Response to 070904OA 01-10-05 FINAL 14

- 19. (Currently amended) The method according to claim 18, wherein said bacteria is an antibiotic-resistant bacteria that is resistant to an antibiotic that is not included within the scope of Formula (I).
- 20. (Original) The method according to claim 19, wherein said antibiotic-resistant bacteria are resistant to an antibiotic selected from the group consisting of vancomycin, methicillin, glycopeptide antibiotics, penicillin and daptomycin.
- 21. (Currently amended) The method according to claim 16, further comprising the step of co-administering more than one compound of Formula (I) according to either of claims 1 or 2 to a subject in need thereof.
- 22. (Currently amended) The method according to claim 16, further comprising the step of co-administering an a second antimicrobial agent other than a compound of Formula (I) to a subject in need thereof wherein said second antimicrobial agent is not included within the scope of Formula (1).
- 23. (Currently amended) The method according to claim 22, wherein said second antimicrobial agent is selected from the group consisting of penicillins, carbapenems, cephalosporins, aminoglycosides, bacitracin, gramicidin, mupirocin, chloramphenicol, thiamphenicol, fusidate sodium, lincomycin, clindamycin, macrolides, novobiocin, polymyxins, rifamycins, spectinomycin, tetracyclines, vancomycin, teicoplanin, streptogramins, anti-folate agents, trimethoprim, pyrimethamine, synthetic antibacterials, nitroimidazoles, quinolones, fluoroquinolones, isoniazid, ethambutol, pyrazinamide, para-aminosalicylic acid (PAS), cycloserine, capreomycin, ethionamide, prothionamide,

thiacetazone, viomycin, everninomicin, glycopeptide, glycylcycline, kctolides, oxazolidinones, imipenen, amikacin, netilmicin, fosfomycin, gentamicin, ceftriaxone, Ziracin ZIRACIN (56-deacetyl-57-demethyl-45-O-de(2-methyl-1-oxopropyl)-12-O-(2,3,6-trideoxy-3-C-methyl-4-O-methyl-3-nitro-alpha-L-arabinohexopyranosyl)flambamycin), LY333328 (oritavancin), Linezolid linezolid (N-[[(5S)-3-[3-fluoro-4-(4-morpholinyl) phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide), Synereid SYNERCID (dalfopristin-quinupristin), Aztreonam aztreonam (2-[[(Z)-[1-(2-amino-4thiazolyl)-2-[[(2S,3S)-2-methyl-4-oxo-1-sulfo-3-azetidinyl] amino]-2oxoethylidene amino oxy -2-methyl-propanoic acid), Metronidazole metronidazole (2methyl-5-nitro-1H-imidazole-1-ethanol), Epiroprim epiroprim (5-[[3,5-diethoxy-4-(1H-imidazole-1-ethanol), Epiroprim ep pyrrol-1-yl)phenyl]methyl]-2,4-pyrimidinediamine), OCA-983 (1-[[(2S)-2-amino-3methyl-1-oxobutyl]amino]-2,5-anhydro-3-S-[(4R,5S,6S)-2-carboxy-6-[(1R)-1hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-en-3-yl]-1,4-dideoxy-3-thio-Dthree-pentitol), GV-143253 (trinem), Sanfetrinem sanfetrinem ((1S, 5S, 8aS, 8bR)-1, 2, 5, 6, 7, 8, 8a, 8b-octahydro-1-[(1R)-1-hydroxyethyl]-5-methoxy-2-oxo-azeto[2,1a]isoindole-4-carboxylic acid), CS-834 ((4R, 5S, 6S)-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-3-[[(3R)-5-oxo-3-pyrrolidinyl]thio]-1-azabicyclo [3.2.0]hept-2-ene-2-carboxylic acid (2,2-dimethyl-1-oxopropoxy)methyl ester), Biapenem biapenem (6-[[(4R,5S,6S)-2carboxy-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hcpt-2-en-3yllthio]-6, 7-dihydro-5H-pyrazolo[1,2-a][1,2,4]triazol-4-ium inner salt), KA 159 (stipiamide), Dynemicin A dynemicin A ((1S,4R,4aR,14S,14aS,18Z)-1,4,7,12,13, 14hexahydro-6,8,11-trihydroxy-3-methoxy-1-methyl-7,12-dioxo-4a,14a-epoxy-4,14-[3]hexene[1,5]diynonaphtho[2,3-c]phenanthridine-2-carboxylic acid), DX8739 ((4R,5S,6S)-3-[[(3S,5S)-5-[[4-[(2S)-5-amino-2-hydroxy-1-oxopentyl]-1piperazinyl]carbonyl]-3-pyrrolidinyl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid), DU 6681 ((4R,5S,6S)-3-[[(6S)-6,7-

16

dihydro-5H-pyrrolo[1,2-a]imidazol-6-yl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0] hept-2-ene-2-carboxylic acid), Cefluprenam cefluprenam ((2E)-N-(2amino-2-oxoethyl)-3-[(6R,7R)-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)](fluoro methoxy)imino]acetyl] amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]-N-ethyl-N-methyl-2-propen-1-aminium inner salt), ER 35786 ((4R,5S,6S)-6-[(1R)-1hydroxyethyl]-3-[[(3S,5S)-5-[(R)-hydroxy(3R)-3-pyrrolidinylmethyl]-3pyrrolidinyl]thio]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid monohydrochloride), Cefoselis cefoselis ((6R,7R)-7-[[(2Z)-(2-amino-4thiazolyl)(methoxy imino)acetyl]amino]-3-[[2,3-dihydro-2-(2-hydroxyethyl)-3-imino-1Hpyrazol-1-yl]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid), Sanfetrinem-coloxetil sanfetrinem celexetil ((1S,5S,8aS,8bR)-1,2,5,6,7,8,8a,8boctahydro-1-[(1R)-1-hydroxyethyl]-5-methoxy-2-oxo-azeto[2,1-a]isoindole-4-carboxylic acid 1-[(cyclohexyloxy)carbonyl] oxy]ethyl ester), Cefpirome cefpirome (1-[[(6R,7R)-7-[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl] amino]-2-carboxy-8-oxo-5-thia-1azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-6,7-dihydro-5H-cyclopenta[b]pyridinium inner salt), HMR-3647 (3-de[(2,6-dideoxy-3-C-methyl-3-O-methyl-alpha-L-ribohexopyranosyl)oxyl-11,12-dideoxy-6-O-methyl-3-oxo-12,11-[oxycarbonyl[[4-[4-(3pyridinyl)-1H-imidazol-1-yl]butyl]imino]]-erythromycin), RU-59863 (C-7 catechol substituted cephalosporin), KP 736 ((6R,7R)-7-[[(2Z)-(2-amino-4-thiazolyl)[[(1,4dihydro-1,5-dihydroxy-4-oxo-2-pyridinyl)methoxy] imino acetyl amino -8-oxo-3-[(1,2,3thiadiazol-5-ylthio)methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid disodium salt), Rifalazil (1',4-didehydro-1-deoxy-1,4-dihydro-3'-hydroxy-5'-[4-(2methylpropyl)-1-piperazinyl}-1-oxo-rifamycin VIII), MEN 10700 ((5R,6S)-3-[[(2-amino-2-oxoethyl)methylamino|methyl]-6-[(1R)-1-hydroxyethyl]-7-oxo-4-thia-1azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid), Lenapenem lenapenem ((4R,5S,6S)-6-[(1R)-1-hydroxyethyl]-3-[[(3S,5S)-5-[(1R)-1-hydroxy-3-(methylamino)propyl]-3-

pyrrolidinyl[thio]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid), BO 2502A ((4R,5S,6S)-3-[(2S,3'S,4S)-[2,3'-bipyrrolidin]-4-ylthio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid), NE-1530 (3'sialyllacto-N-neotetraose), PR 39 (L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-Lprolyl-L-prolyl-L-tyrosyl-L-leucyl-L-prolyl-L-arginyl-L-prolyl-L-arginyl-L-prolyl-Lprolyl-L-prolyl-L-phenylalanyl-L-phenylalanyl-L-prolyl-L-prolyl-L-arginyl-L-leucyl-Lprolyl-L-prolyl-L-arginyl-L-isoleucyl-L-prolyl-L-prolylglycyl-L-phenylalanyl-L-prolyl-Lprolyl-L-arginyl-L-phenylalanyl-L-prolyl-L-prolyl-L-arginyl-L-phenylalanyl-Lprolinamide [--SEQ ID NO: 1--]), K130 (5-[[4-[3-[[4-[4aminophenyl)sulfonyl]phenyl]amino[propoxyl-3,5-dimethoxyphenyl] methyl]-2,4pyrimidinediamine), PD 138312 ((R)-7-[3-(1-amino-1-methylethyl)-1-pyrrolidinyl]-1cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-1,8-naphthyridine-3-carboxylic acid), PD 140248 (7-[(3R)-3-[(1S)-1-aminoethyl]-1-pyrrolidinyl]-1-(2,4-difluorophenyl)-6-fluoro-1,4-dihydro-4-oxo-1,8-naphthyridine-3-carboxylic acid), CP 111905 (5-deoxy-5-[[(2E)-3-[3-hydroxy-4-(2-propenyloxy)phenyl]-2-methyl-1-oxo-2-propenyl]amino]-1,2-Omethylene-D-neo-inositol), Sulopenem sulopenem ((5R,6S)-6-[(1R)-1-hydroxyethyl]-7oxo-3-[[(1R,3S)-tetrahydro-1-oxido-3-thienyl]thio]-4-thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid), ritipenam acoxyl ((5R,6R)-3-[[(aminocarbonyl)oxy]methyl]-6-[(1R)-1-hydroxyethyl]-7-oxo-4-thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid (acetyloxy)methyl ester), RO-65-5788 ((6R,7R)-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3yl)(hydroxyimino)acetyl]amino]-3-[(E)-[(3'R)-1'-[[(5-methyl-2-oxo-1,3-dioxol-4yl)methoxy]carbonyl]-2-oxo[1,3'-bipyrrolidin]-3-ylidene]methyl]-8-oxo-5-thia-1azabicyclo[4.2.0]oct-2-cne-2-carboxylic acid monosodium salt), Sch-40832 (N-[[48-[1-[[2,6-dideoxy-3-O-(2,6-dideoxy-D-arabino-hexopyranosyl)-D-arabinohexopyranosyl]oxy]ethyl]-15-ethylidene-1,3a,4,5,10,11,12,13,14,15,19,20,21,22,28, 29,41,42-octadecahydro-41-hydroxy-12,45-bis(1-hydroxyethyl)-1-(hydroxymethyl)-22-

18

(1-hydroxy-1-methylpropyl)-36-methyl-51,54,57-tris(methylene)-3-(methylthio)-10.13.20.27.38.49.52.55.58-nonaoxo-18H,27H-5a,29-(iminoethaniminoethanimino ethaniminoethanimino[7,2]quinolinomethanoxy methano)-9,6:19,16:26,23:33,30tetranitrilo-16H,33aH-imidazo[1',5':1,6]pyrido [3,2-m][1,11,17,24,4,7,20, 27]tetrathiatetraazacyclotriacontin-1-yl]carbonyl]-2,3-didehydroalanyl-2,3-didehydroalanine methyl ester stereoisomer), micacocidin A ((OC-6-26-A)-[(4S)-2-[(2S)-2-[(2R,4R)-2-[(4R)-4,5-dihydro-2-[2-(hydroxy-.kappa.O)-6-pentylphenyl]-4-thiazolyl-.kappa.N3]-3-methyl-4-thiazolidinyl-.kappa.N3]-2-(hydroxy-.kappa.O)-1,1dimethylethyl]-4,5-dihydro-4-methyl-4-thiazolexarboxylato(2-)-.kappa.N3, .kappa.O4]-Zinc), SR-15402 ((1S,5S,8aS,8bR)-1,2,5,6,7,8,8a,8b-octahydro-1-[(1R)-1-hydroxyethyl]-2-oxo-5-[(3S)-3-pyrrolidinylthio]-azeto[2,1-a]isoindole-4-carboxylic acid TOC 39 (1-(2amino-2-oxoethyl)-4-[[(1E)-2-[(6R,7R)-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3yllethenyllthio-pyridinium inner salt), carumonam ([[(Z)-[2-[[(2S,3S)-2-[[(aminocarbonyl)oxylmethyl]-4-oxo-1-sulfo-3-azetidinyl]amino]-1-(2-amino-4thiazolyl)-2-oxoethylidene amino loxyl-acetic acid), Cefozopran cefozopran (1-[[(6R,7R)-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)(methoxy imino)acetyl]amino]-2carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-imidazo[1,2b]pyridazinium inner salt), Cefetamet pivoxil cefetamet pivoxil ((6R,7R)-7-[[(2Z)-(2amino-4-thiazolyl)(methoxy imino)acetyl]amino]-3-methyl-8-oxo-5-thia-1azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid (2,2-dimethyl-1-oxopropoxy)methyl ester), and T 3811 (des-F(6)-quinolone).

24. (Currently amended) The method according to claim 22, wherein said antimicrobial agent is selected from the group consisting of imipenen, amikacin, netilmicin, fosfomycin, gentamicin, ceftriaxone, teicoplanin, Ziraein ZIRACIN (56-C058 Response to 070904OA 01-10-05 FINAL 19

deacetyl-57-demethyl-45-O-de(2-methyl-1-oxopropyl)-12-O-(2,3,6-trideoxy-3-C-methyl-4-O-methyl-3-nitro-alpha-L-arabino-hexopyranosyl)flambamycin), LY333328 (oritavancin), HMR-3647 (3-de[(2,6-dideoxy-3-C-methyl-3-O-methyl-alpha-L-ribo-hexopyranosyl)oxy]-11,12-dideoxy-6-O-methyl-3-oxo-12,11-[oxycarbonyl[[4-[4-(3-pyridinyl)-1H-imidazol-1-yl]butyl]imino]]-erythromycin), Linezolid linezolid (N-[[(5S)-3-[3-fluoro-4-(4-morpholinyl) phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide), Synereid SYNERCID (dalfopristin-quinupristin), Aztreonam aztreonam (2-[[(Z)-[1-(2-amino-4-thiazolyl)-2-[[(2S,3S)-2-methyl-4-oxo-1-sulfo-3-azetidinyl] amino]-2-oxoethylidene]amino]oxy]-2-methyl-propanoic acid), and Metronidazole metronidazole (2-methyl-5-nitro-1H-imidazole-1-ethanol).

- 25. (Previously presented) The method according to claim 17, wherein said subject is selected from the group consisting of a human and an animal.
 - 26. (Original) The method according to claim 25, wherein said subject is a human.
 - 27. (Previously presented) The compound of claim 1 having the formula (II):

20

wherein R^{56} is an optionally substituted straight-chain C_8 - C_{14} alkyl group.

Claims 28-29 (Canceled)

30. (Previously presented) A method of using the compound according to claim 27 to make a compound according to either of claims 1 or 2 of the formula:

wherein said method comprises treating a compound of claim 27 with a reagent selected from the group consisting of an isocyanates, isothiocyanates, activated esters, acid chlorides, sulfonylchlorides, activated sulfonamides, heterocycles bearing readily displaceable groups, imidates, and lactones; or alternatively, treating a compound of claim 27 reductively with an aldehyde.

31. (Previously presented) The compound according to either of claims 1 or 2 wherein said compound is selected from

Cpd #	R	\mathbb{R}^1	R ²
1	NHCONH(CH ₂) ₇ CH ₃	NH ₂	-FE

2	NHCONH(CH ₂) ₁₁ CH ₃	NH ₂	NH,
3	NHCONH(CH ₂) ₁₀ CH ₃	HN NH ₂	O NH ₂
5	HŅ CI	HN NH ₂ N	o NH₂
17	NHCONH(CH ₂) ₁₁ CH ₃	HN NH ₂ N	
48	NHCONH(CH ₂) ₁₀ CH ₃	NH ₂	O SH ₂
56	NHCONH(CH₂)7CH₃	NHBoc NHBoc	1) = 0
57	NHCONH(CH ₂) ₁₀ CH ₃	NHBoc NHBoc	
58	NHCONH(CH ₂) ₁₁ CH ₃	NHBoc NHBoc	o ₹
62	NHCONH(CH ₂) ₇ CH ₃	HN NH ₂	-}
63	NHCONH(CH ₂) ₁₀ CH ₃	HN NH ₂	÷ Š
64	NHCONH(CH ₂) ₁₁ CH ₃	HN NH2	O NH2
69	NHCONH(CH ₂) ₇ CH ₃	HN NH2 N	NH ₂
70	NHCONH(CH ₂) ₇ CH ₃	O NH2	O NH ₂
71	NHCONH(CH ₂) ₇ CH ₃	NH HŅ NH₂	0 NH ₂

75	NHCONH(CH ₂) ₁₀ CH ₃	NBoc HN NHBoc	NE Z
76	NHCONH(CH ₂) ₇ CH ₃	HN OCH3	NH2
77	NHCONH(CH ₂) ₇ CH ₃	HIN N	NH ₂
78	NHCONH(CH ₂) ₇ CH ₃	HIN NO2	
87	NHCONH(CH ₂) ₁₁ CH ₃	HN OCH3	NH2
88	NHCONH(CH ₂) ₁₁ CH ₃	HN NO2	NH.
89	NHCONH(CH ₂) ₁₁ CH ₃	HN N	NHZ
108	NHCONH(CH ₂) ₁₀ CH ₃	O NH ₂	NH,
113	NHCONH(CH ₂) ₁₀ CH ₃	HN N	O NH ₂
114	NHCONH(CH ₂) ₁₀ CH ₃	HN OCH ₃	¥ +
117	NHCONH(CH2)8CH3	NHBoc	O NH ₂
118	NHCONH(CH ₂) ₈ CH ₃	NH₂	O NH2
119	NHCONH(CH2)9CH3	NHBoc	Ž
120	NHCONH(CH2)9CH3	NH ₂	E -

32. (Previously presented) The compound according to claim 31 wherein said compound is selected from

Cpd #	R	R¹	R²
2	NHCONH(CH ₂) ₁₁ CH ₃	NH ₂	N E2
3	NHCONH(CH₂)10CH₃	HIN NH ₂ NH	NH2
48	NHCONH(CH ₂) ₁₀ CH ₃	NH ₂	O NH2
89	NHCONH(CH ₂) ₁₁ CH ₃	HN N	O NH ₂
118	NHCONH(CH ₂) ₈ CH ₃	NH ₂	O SH ₂
120	NHCONH(CH ₂) ₉ CH ₃	NH ₂	PH ST

33. (Previously presented) The compound according claim 2, wherein R is selected from the group consisting of:

wherein each of R3 and R5 is independently selected from the group consisting of hydrido, alkyl, aryl, heterocyclyl and heteroaryl, and wherein R²⁰⁰ is aryl.

34. (Previously presented) The compound according to claim 33, wherein R is

and wherein R4 is a substituted phenyl.

35. (Previously presented) The compound according to claim 34, wherein R is

and wherein X³ is chloro or trifluoromethyl.

- 36. (Currently amended) The method according to claim 23, wherein anti-folate agents are sulfonamides or synthetic antibacterials are selected from the group consisting of nitrofurans, methonomino mandelate and methonomino hippurate.
- 37. (New) The method according to claim 22, wherein the second antimicrobial agent is a synthetic antibacterial selected from the group consisting of nitrofurans, methenamine mandelate and methenamine hippurate.

C058 Response to 070904OA 01-10-05 FINAL

26